

Shenandoah - Potomac Tributary Strategy Revision

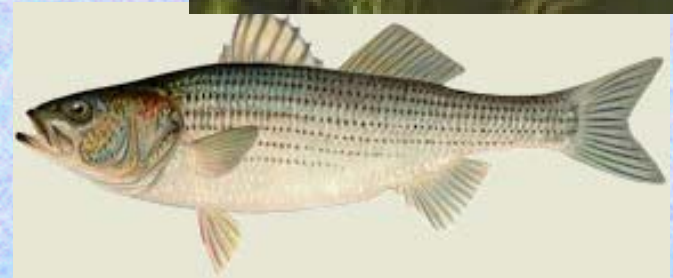
Shenandoah River

Tamara Keeler
Regional Manager

August 12, 2003

Purpose of Tributary Strategies

- Restore and protect aquatic habitat for living resources
- Reduce, and “cap” nutrient and sediment loads
- Identify control actions that are practical, cost-effective, and equitable
- Develop stakeholder involvement and commitments



Basis for Tributary Strategies

- Actions can't start at water's edge
- Each basin is different
- Each basin affects Chesapeake Bay differently



Basis for Tributary Strategy Program

- **State code** (tributary strategies act; Water quality improvement act)

“The plans shall be developed in consultation with affected stakeholders, including, but not limited to local government officials; Wastewater treatment operators; Seafood industry representatives; Commercial and recreational fishing interests; Developers; Farmers; Local, regional and statewide conservation and environmental interests...”

Basis for Tributary Strategy Program

- **Chesapeake 2000 Agreement:**
 - Water Quality Restoration and Protection
“complete a public process to develop and begin implementation of revised Tributary Strategies to achieve and maintain the assigned loading goals”

Why Revise Now?

- Water quality conditions redefined
- Pollution loads allocated to major river basins
- Strategy revisions due April 2004

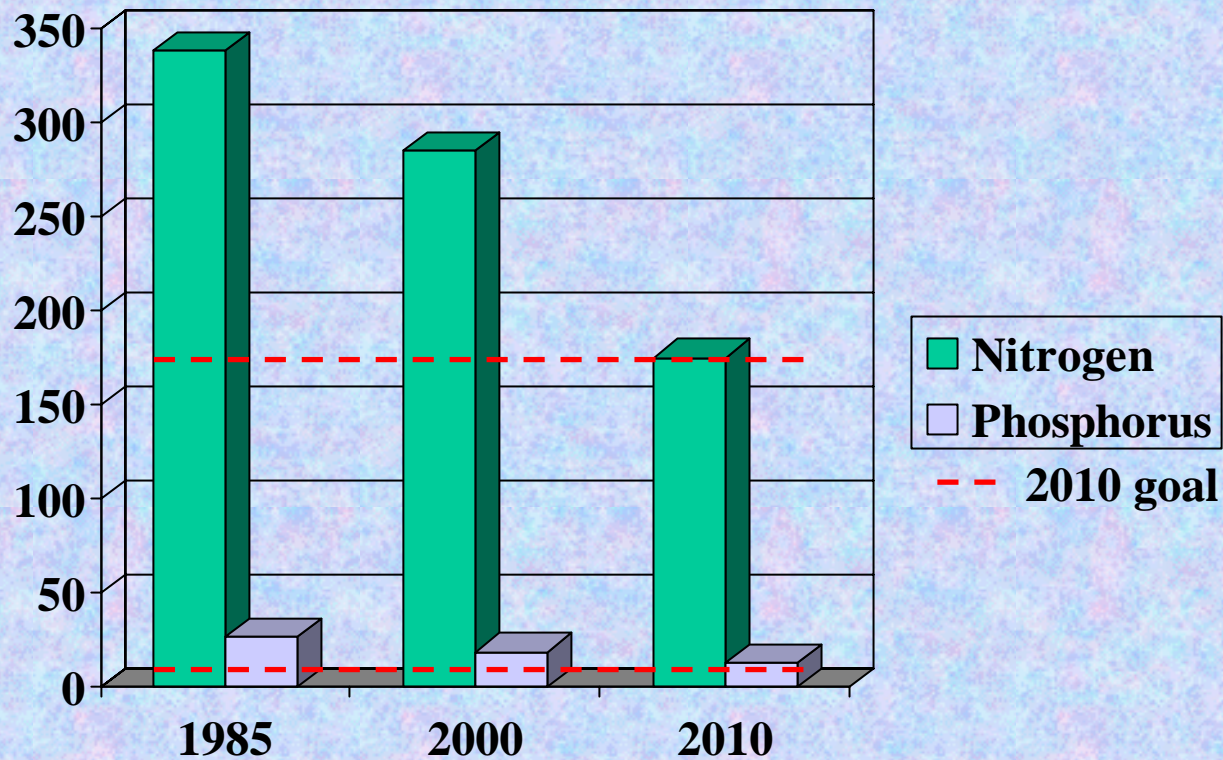
Key Considerations for Revising Tributary Strategies

- Existing strategies serve as the starting point
- A voluntary, cooperative approach
- Seeking common agreement on what needs to be done
- Principles of cost-effectiveness, feasibility, and equity are key

More Considerations

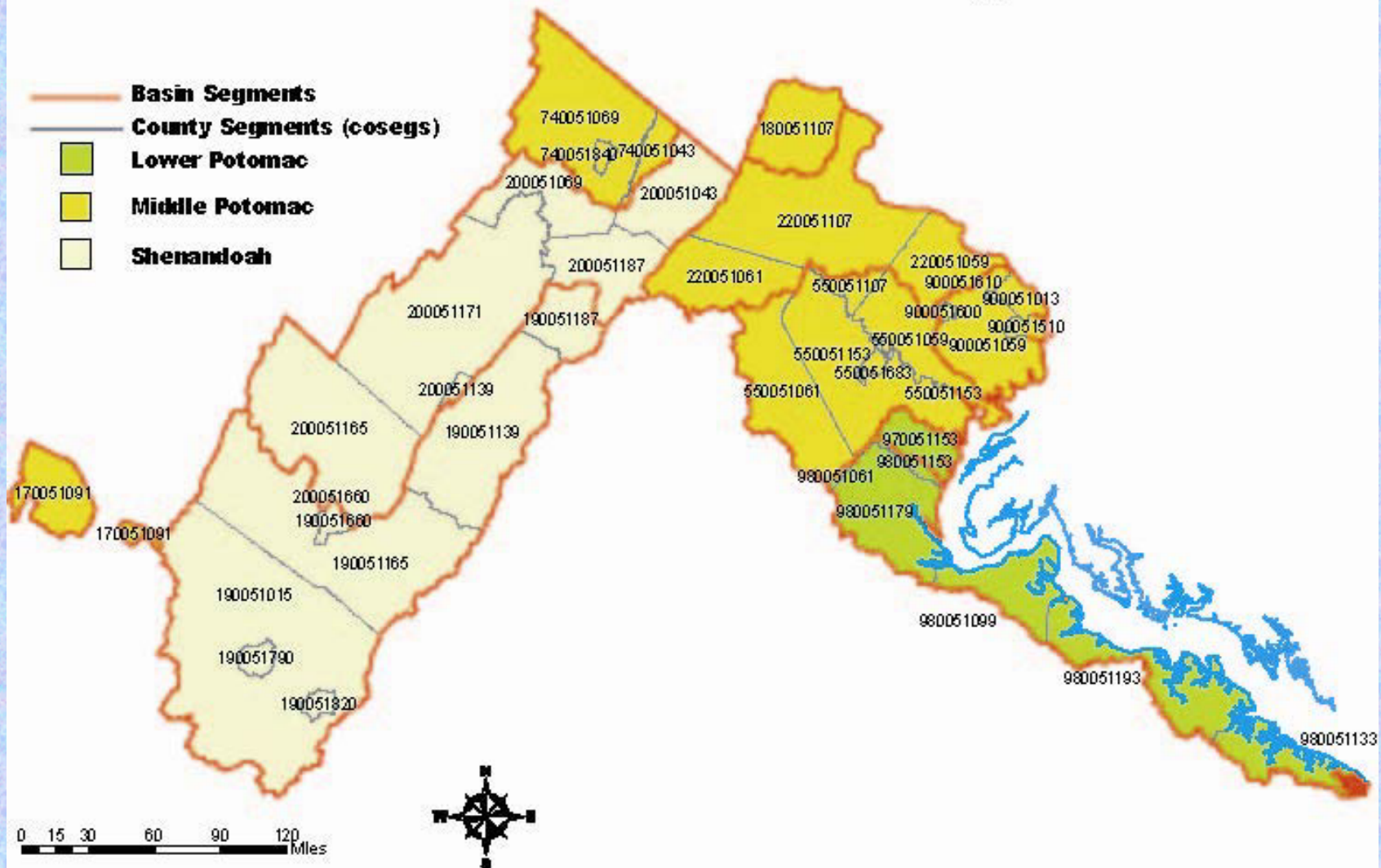
- Emphasize progress made to date
- Identify additional controls needed to achieve revised loading goals
- Bay and tidal tributaries on “impaired waters list”

Baywide N&P Change with 2010 Goal*



* *In millions of pounds per year.*

Potomac River Basin Commonwealth of Virginia



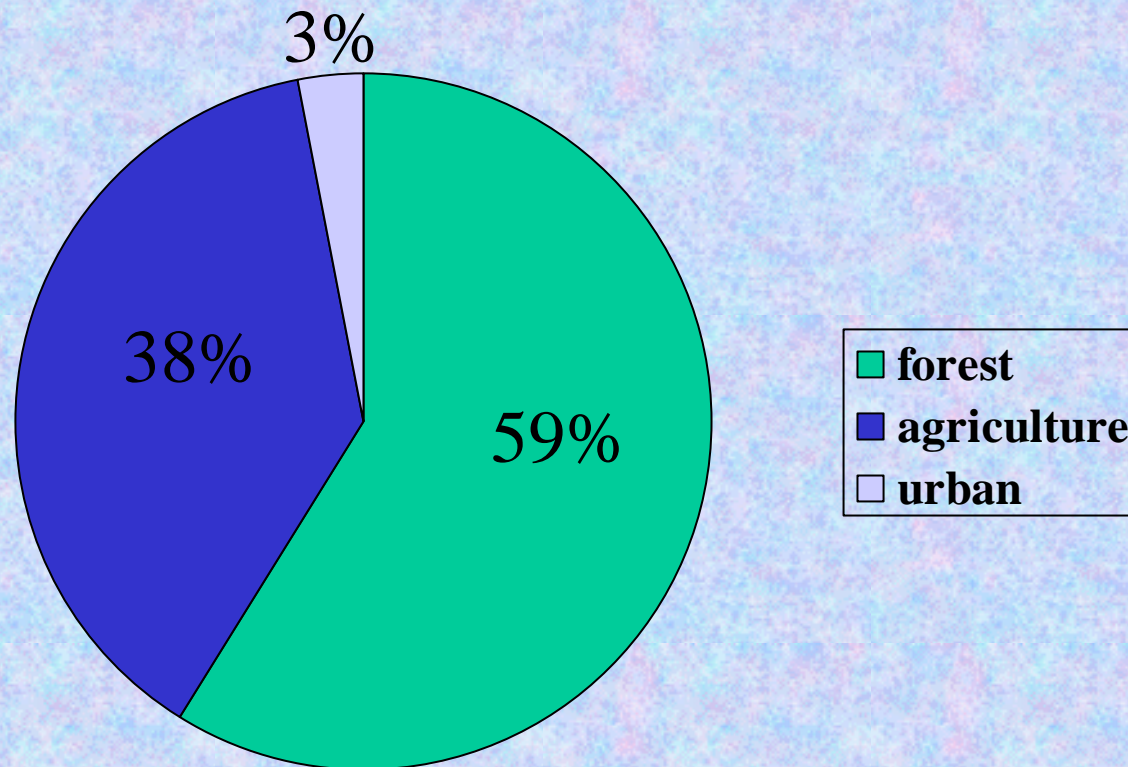
NVRC MAP Date: June 2003

The Shenandoah River Watershed

(a Basin “Snapshot”)

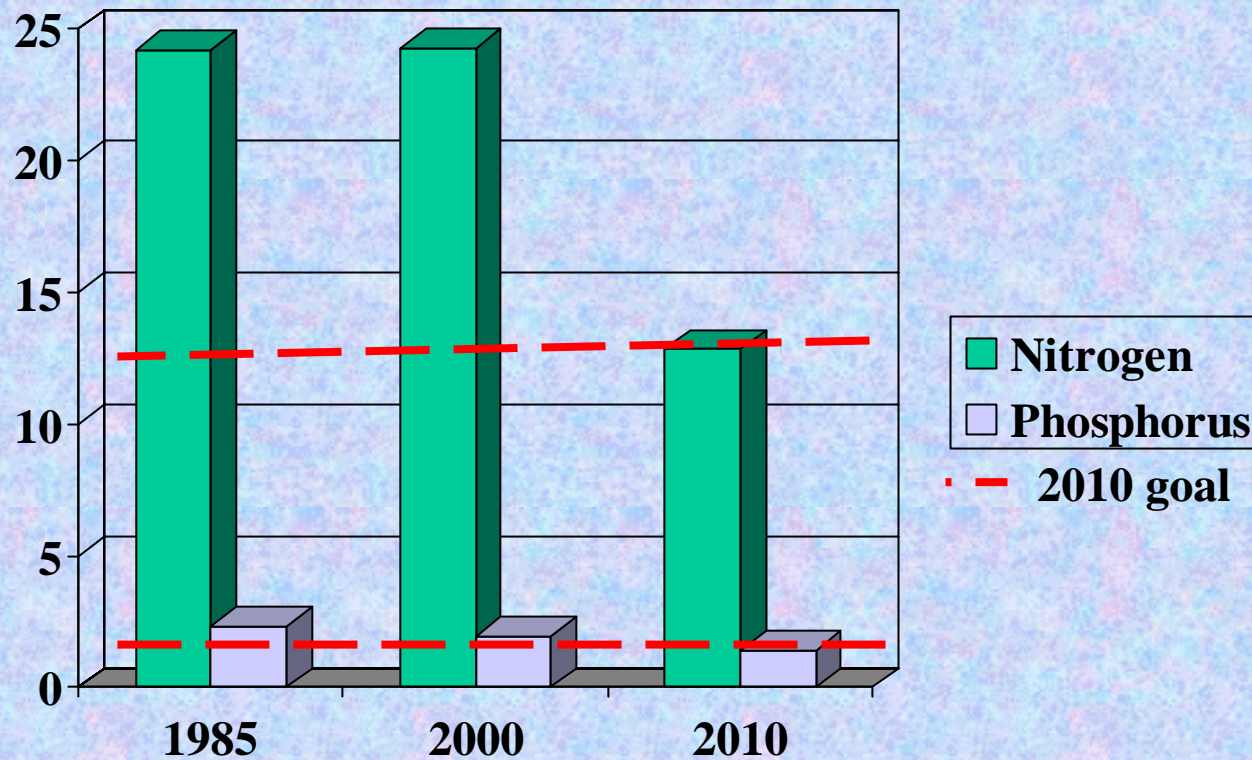
- Length: 60 miles
- Drainage: 1.88 million acres
- Counties: 7
- Population: 328,985
- Tributaries: North Fork, South Fork, Middle River, North and South Rivers

Land Uses in the Shenandoah River Watershed



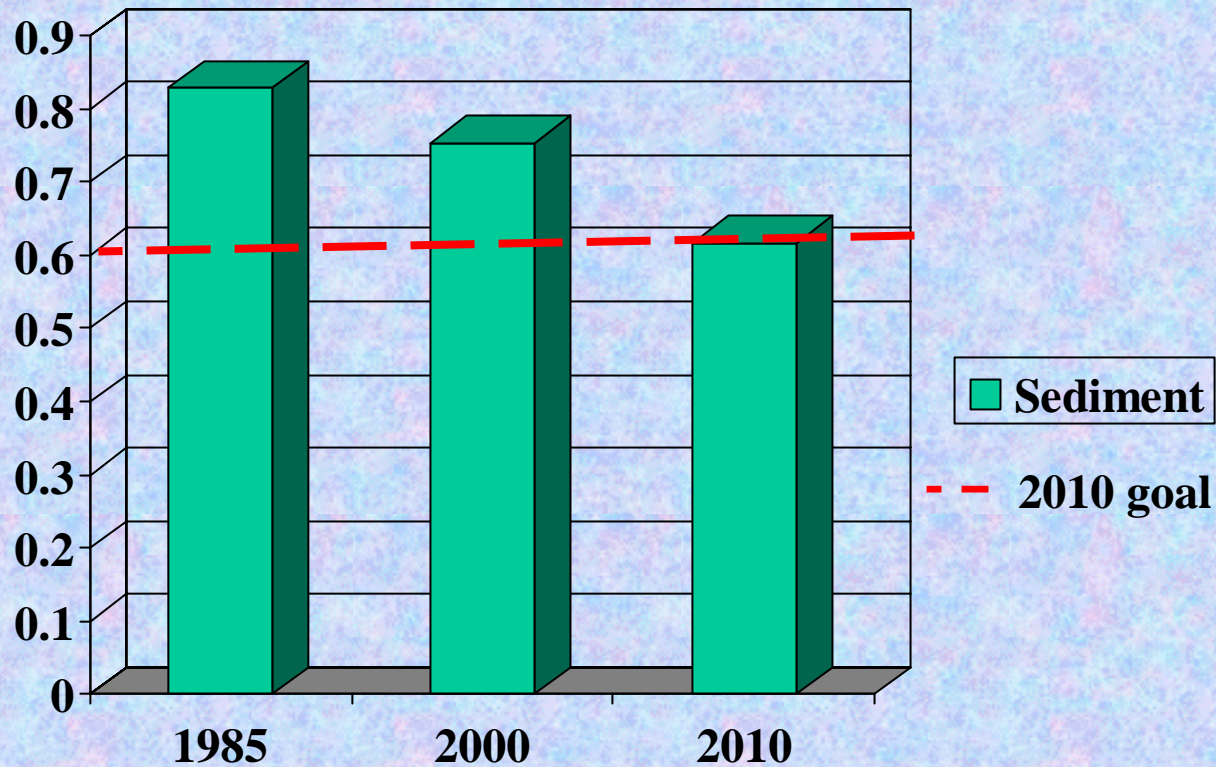
Shenandoah-Potomac Basin

N&P Change with 2010 Goal*



* *In millions of pounds per year.*

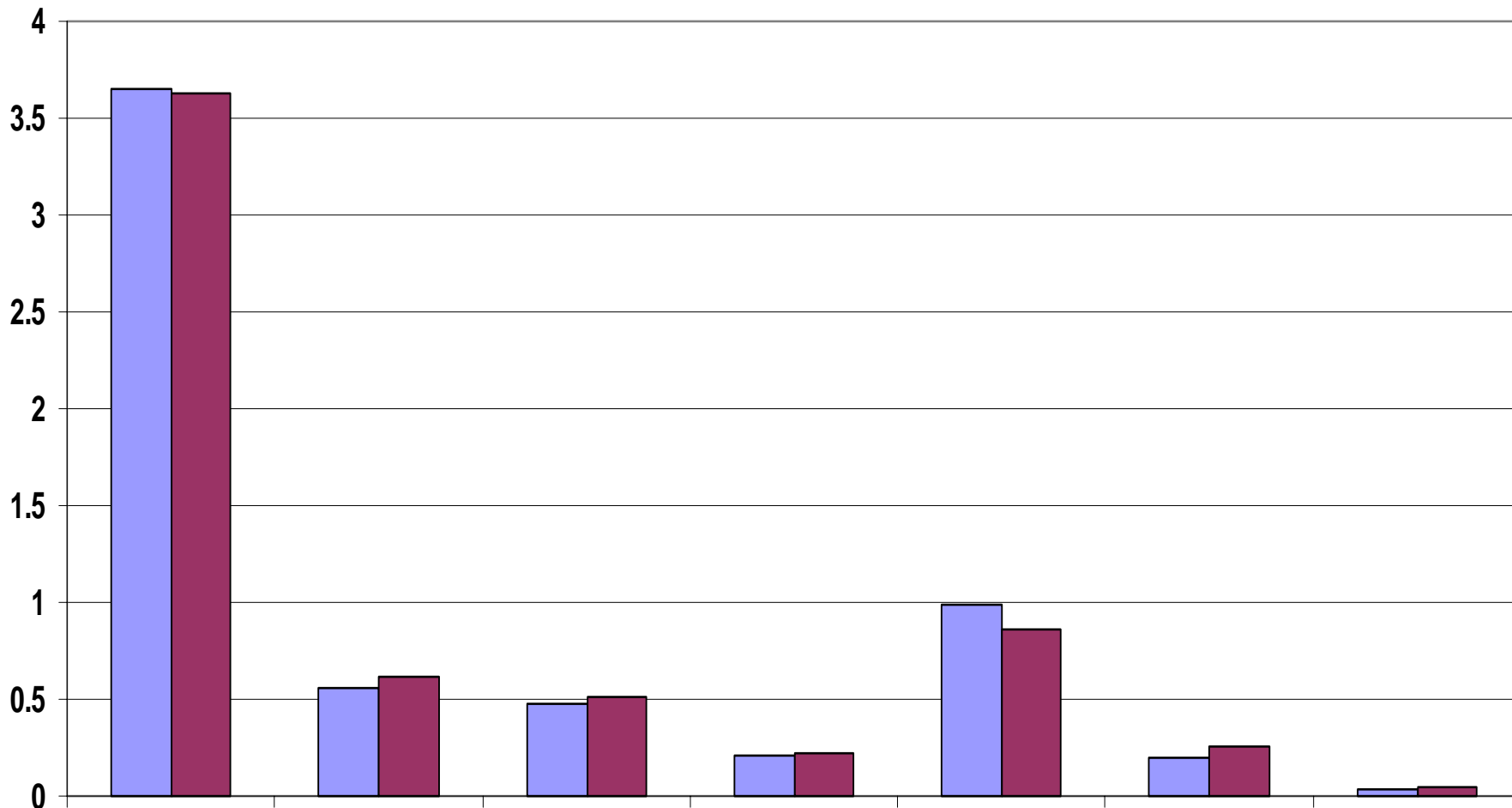
Shenandoah-Potomac Basin Sediment Change with 2010 Goal*



* *In million tons per year.*

Shenandoah River Basin Nitrogen Loadings by Source Category

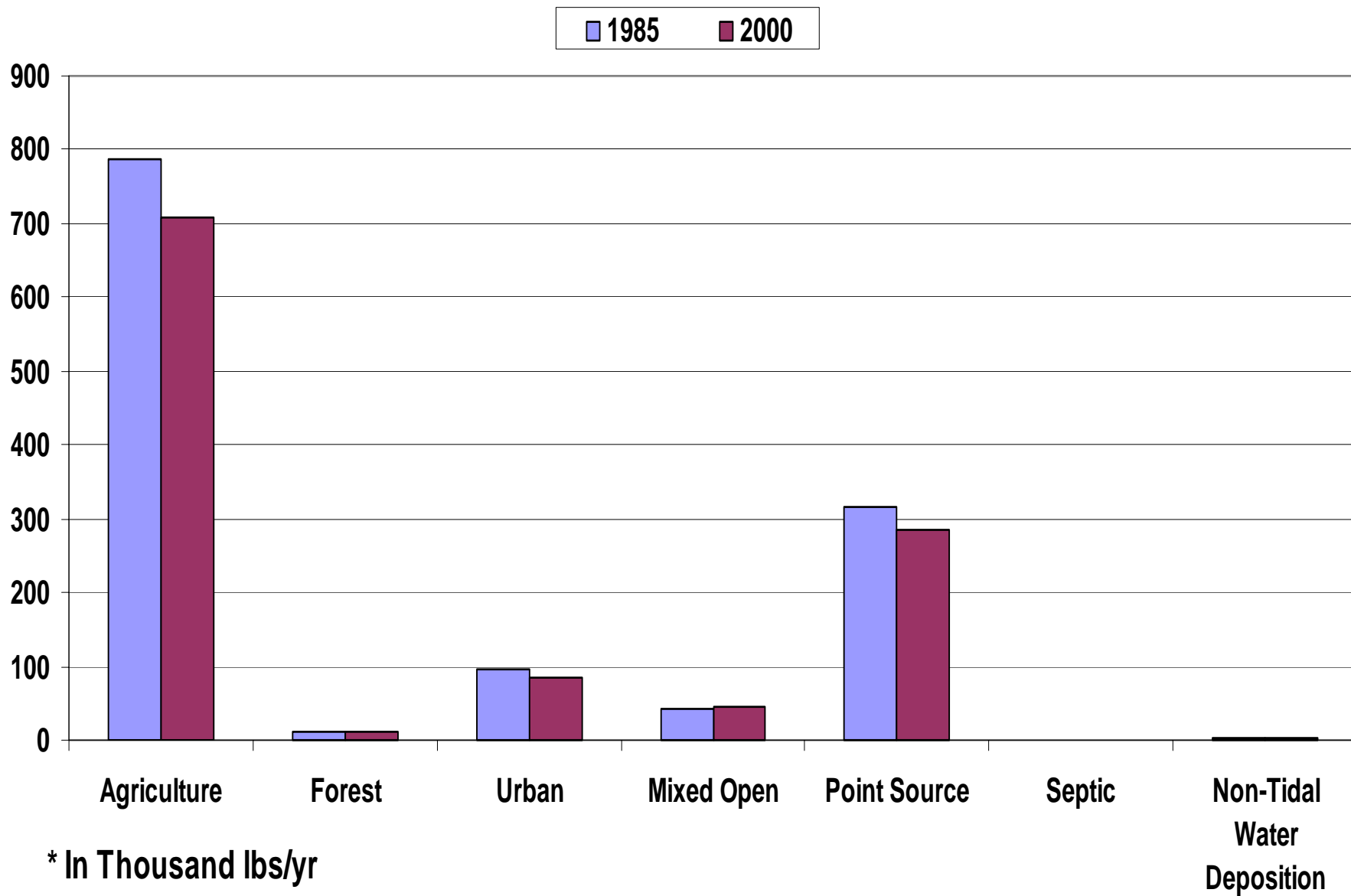
1985 2000



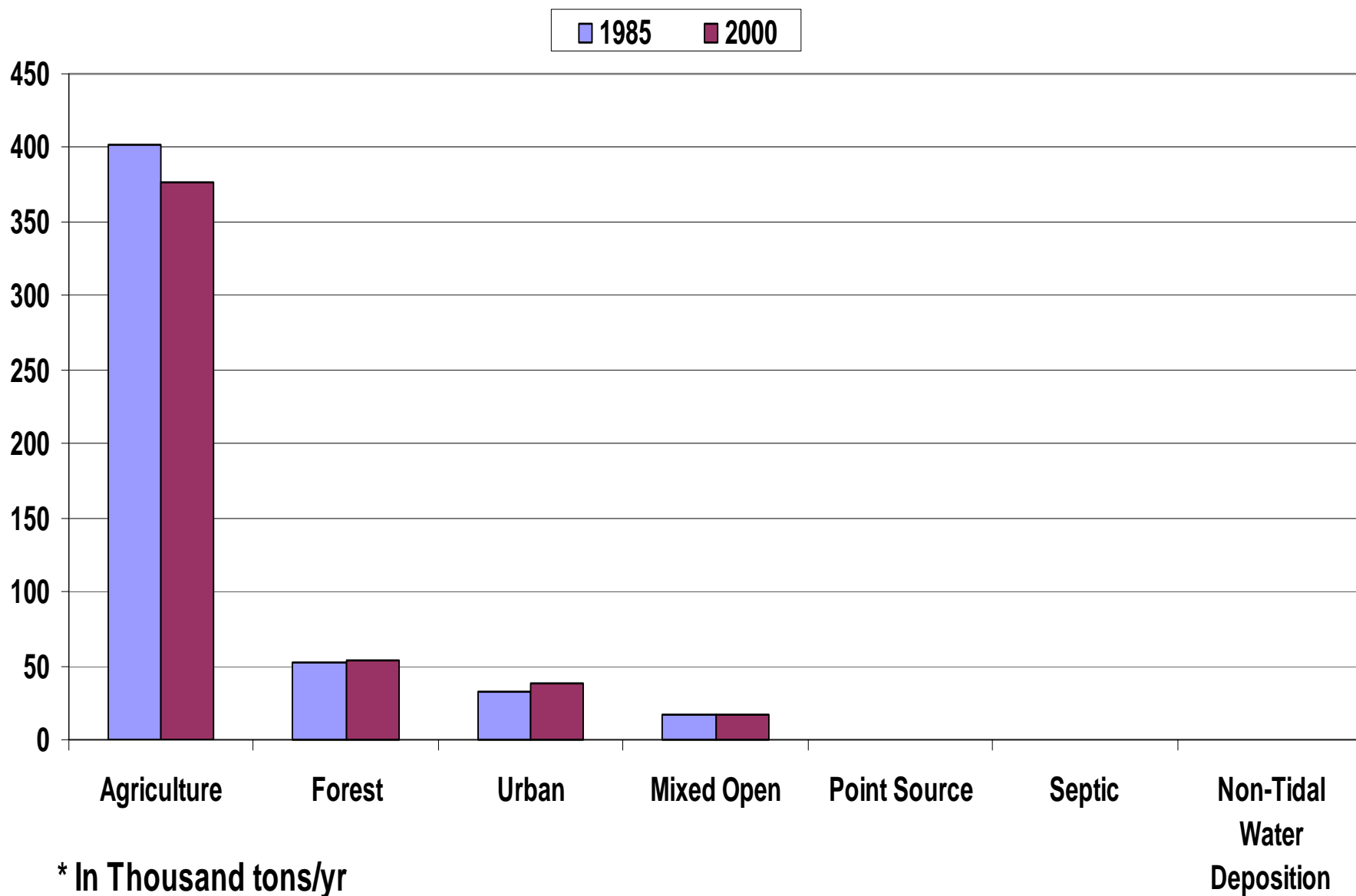
* In Million lbs/yr

Non-Tidal
Water
Deposition

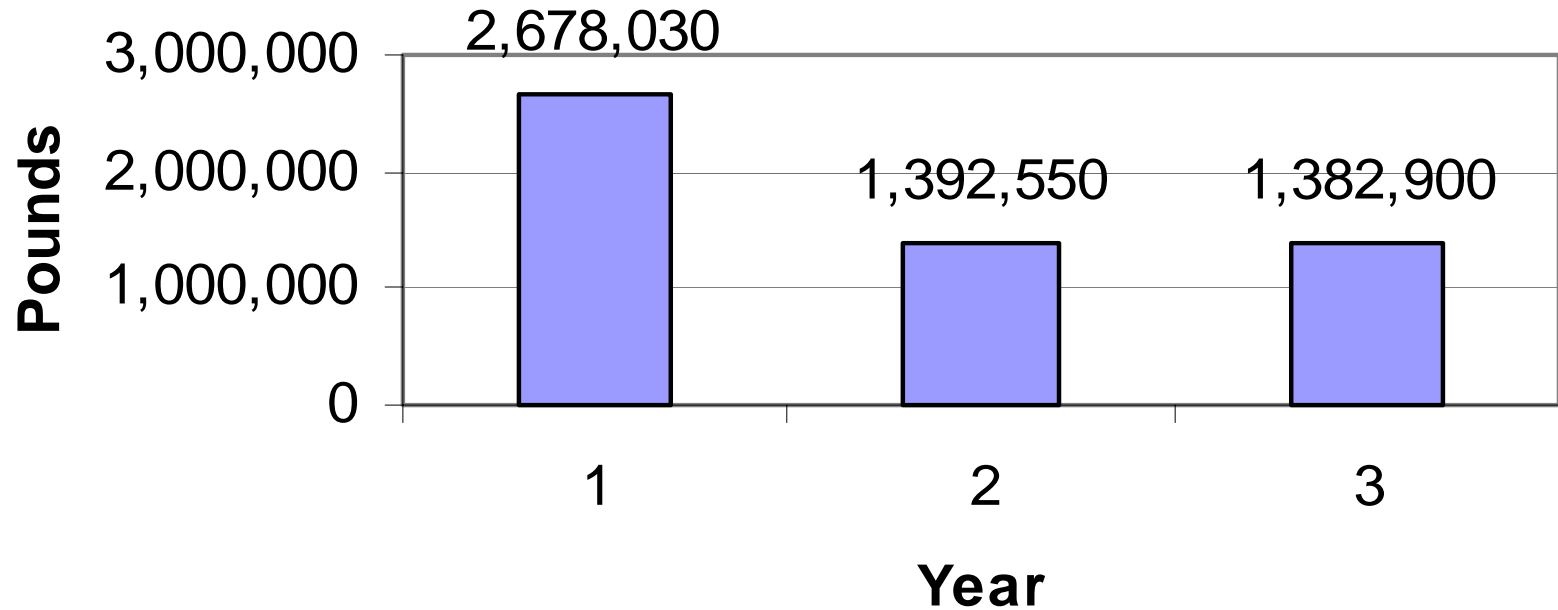
Shenandoah River Basin Phosphorus Loadings by Source Catagory



Shenandoah River Basin Sediment Loadings by Source Catagory



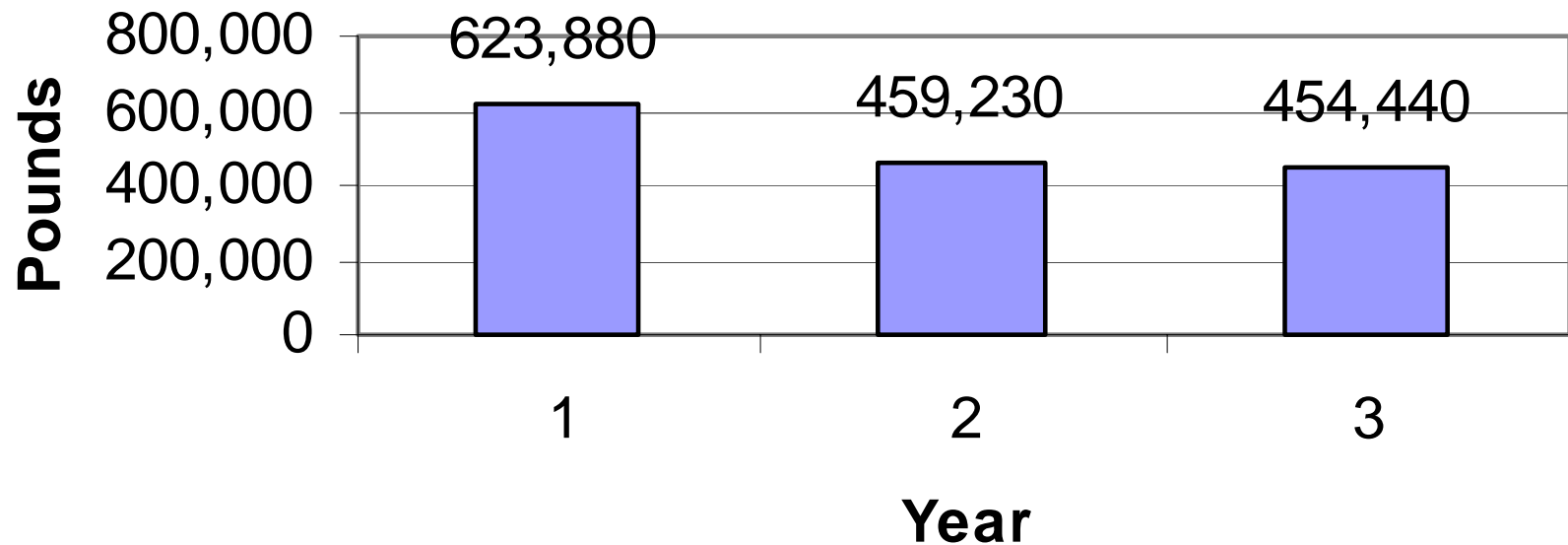
Point Source Discharge Reductions Expected from WQIF Projects



Total Nitrogen Loads - Shenandoah

	2,678,030	1,392,550	1,382,900
1985	2002	All WQIF Online	
Year 1	Year 2	Year 3	

Point Source Discharge Reductions Expected from WQIF Projects



Total Phosphorus Loads - Shenandoah

623,880

459,230

454,440

1985

2002

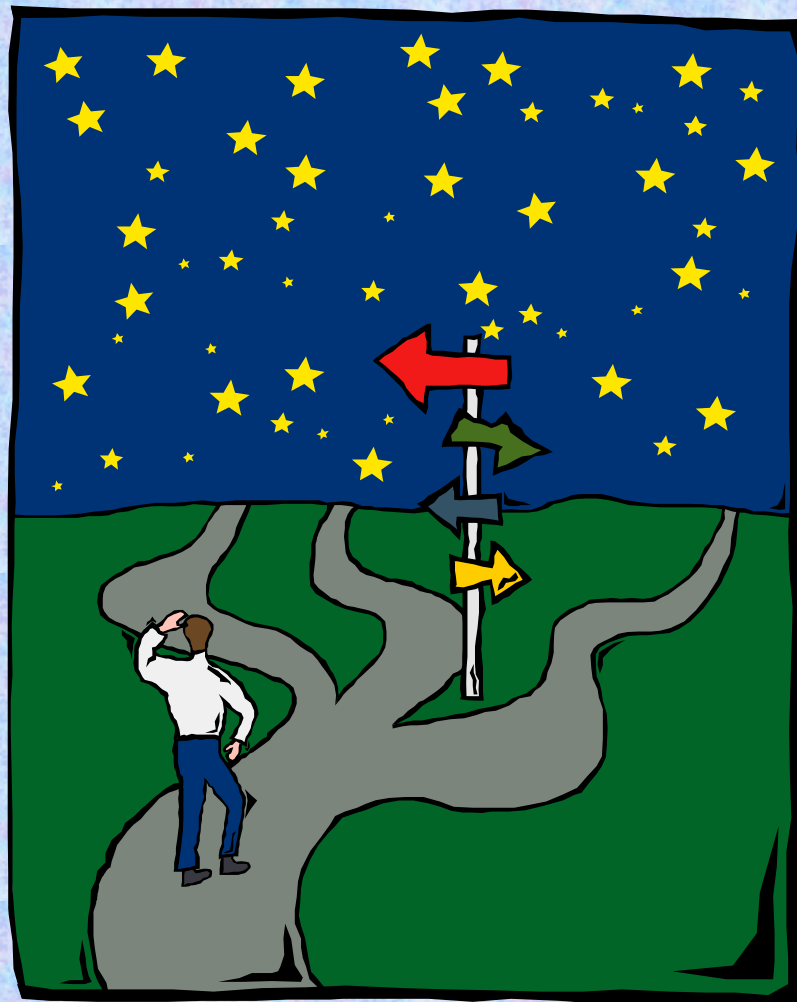
All WQIF Online

Year 1

Year 2

Year 3

How Do We Get There From Here?



Stakeholder Involvement

"Trib Strategy Teams" :

- Local governments
- Planning district commissions
- Soil and water conservation districts
- Wastewater treatment facilities
- Conservation organizations
- Business interest groups
- Industry
- Citizens



Stakeholder Involvement (cont'd)

- State agencies
- Federal agencies (land management)
- Real estate associations
- Homebuilder associations
- Shenandoah Pure Water Forum
- RWRPC
- Wastewater Treatment Plant Network



Potomac River

Team Leader: Marc Aveni
Potomac Regional Manager
maveni@dcrr.state.va.us
Ph: (540) 347-6420

Shawn Smith
CBLAD, Principal Planner
Ph: (804) 371-0609

Stakeholder Group:
Potomac Watershed Roundtable

Rappahannock River

Team Leader: Matt Criblez
York & Rappahannock Regional Manager
mcriblez@dcrr.state.va.us
Ph: (804) 443-6752

Alexander Adams
CBLAD, Senior Planner
Ph: (804) 371-6222

Stakeholder Group:
Rappahannock River Basin Commission

Shenandoah River

Team Leader: Tamara Keeler
Shenandoah Regional Manager
Ph: (540) 332-9991
tkeeler@dcrr.state.va.us

Stakeholder Group:
Pure Water 2000

York River

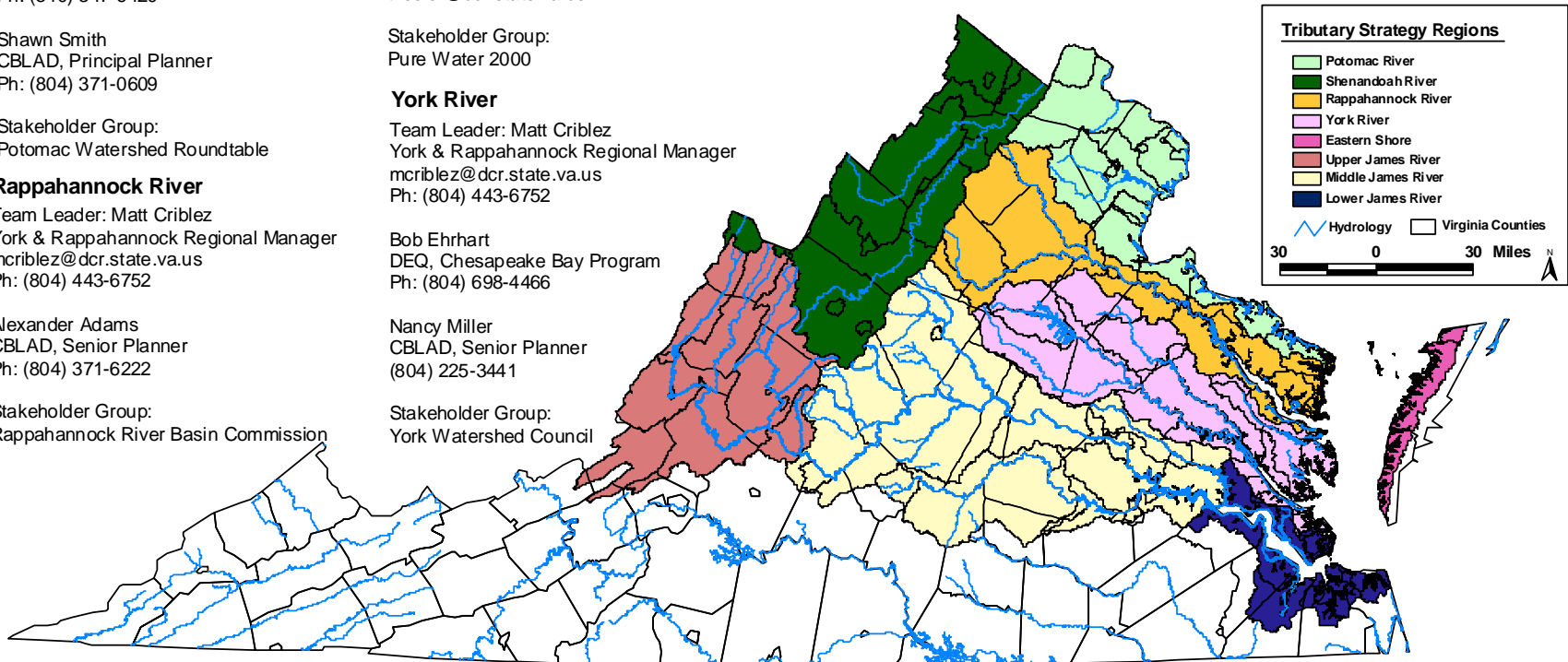
Team Leader: Matt Criblez
York & Rappahannock Regional Manager
mcriblez@dcrr.state.va.us
Ph: (804) 443-6752

Bob Ehrhart
DEQ, Chesapeake Bay Program
Ph: (804) 698-4466

Nancy Miller
CBLAD, Senior Planner
(804) 225-3441

Stakeholder Group:
York Watershed Council

Tributary Strategy Teams With Stakeholder Groups



Upper James River

Team Leader: Tamara Keeler
Shenandoah Regional Manager
Ph: (540) 332-9991
tkeeler@dcrr.state.va.us

Bob Ehrhart
DEQ - Chesapeake Bay Program
Ph: (804) 698-4466

Stakeholder Group:
Upper James River Conservation Roundtable

Middle James River

Team Leader: Michael Bowman
James Regional Manager
Ph: (804) 527-4484
mbowman@dcrr.state.va.us

Bob Ehrhart
DEQ, Chesapeake Bay Program
Ph: (804) 698-4466

Roberta Rhur
CBLAD - Senior Planner
Ph: (804) 786-1795

Stakeholder Group:
Piedmont James River Roundtable

Lower James River

Team Leader: Noah Hill
Albemarle, Chowan, & Coastal Watershed Coordinator
nhill@dcrr.state.va.us
Ph: (757) 925-2468

Doug Wetmore
CBLAD, Principal Planner
Ph: (804) 371-6221

Stakeholder Group:
Hampton Roads Lower James River Roundtable

Eastern Shore

Team Leader: Sara Grove
Albemarle, Chowan & Coastal Regional Manager
sgrove@dcrr.state.va.us
Ph: (757) 925-2468

Shawn Smith
CBLAD, Principal Planner
Ph: (804) 371-0609

Stakeholder Group:
Eastern Shore Watersheds Network

Process: *Local* Planning

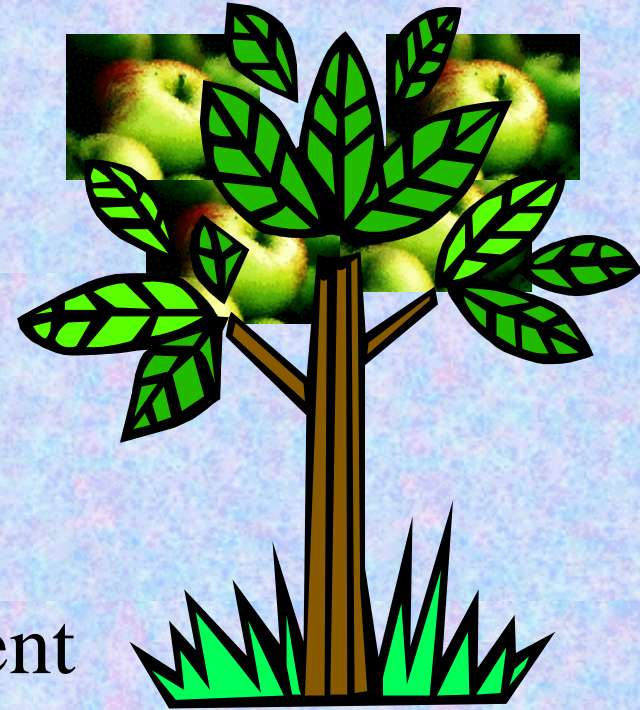
- Basin-specific process
- Local flexibility in meeting goals
- Trib team will help define process & carry out work
- Need to identify and build on past success
 - e.g. Roundtable, SWCD accomplishments
- Continuing refinement of trib strategy to reflect new actions & commitments

Local Planning

- Expand participation to ultimately include all types of land users
 - e.g. suburban homeowners – urban nutrient management
- Accent on developing very local buy-in
- Prominence of local governments
 - Land Use
 - Comprehensive Planning
- Public comment period

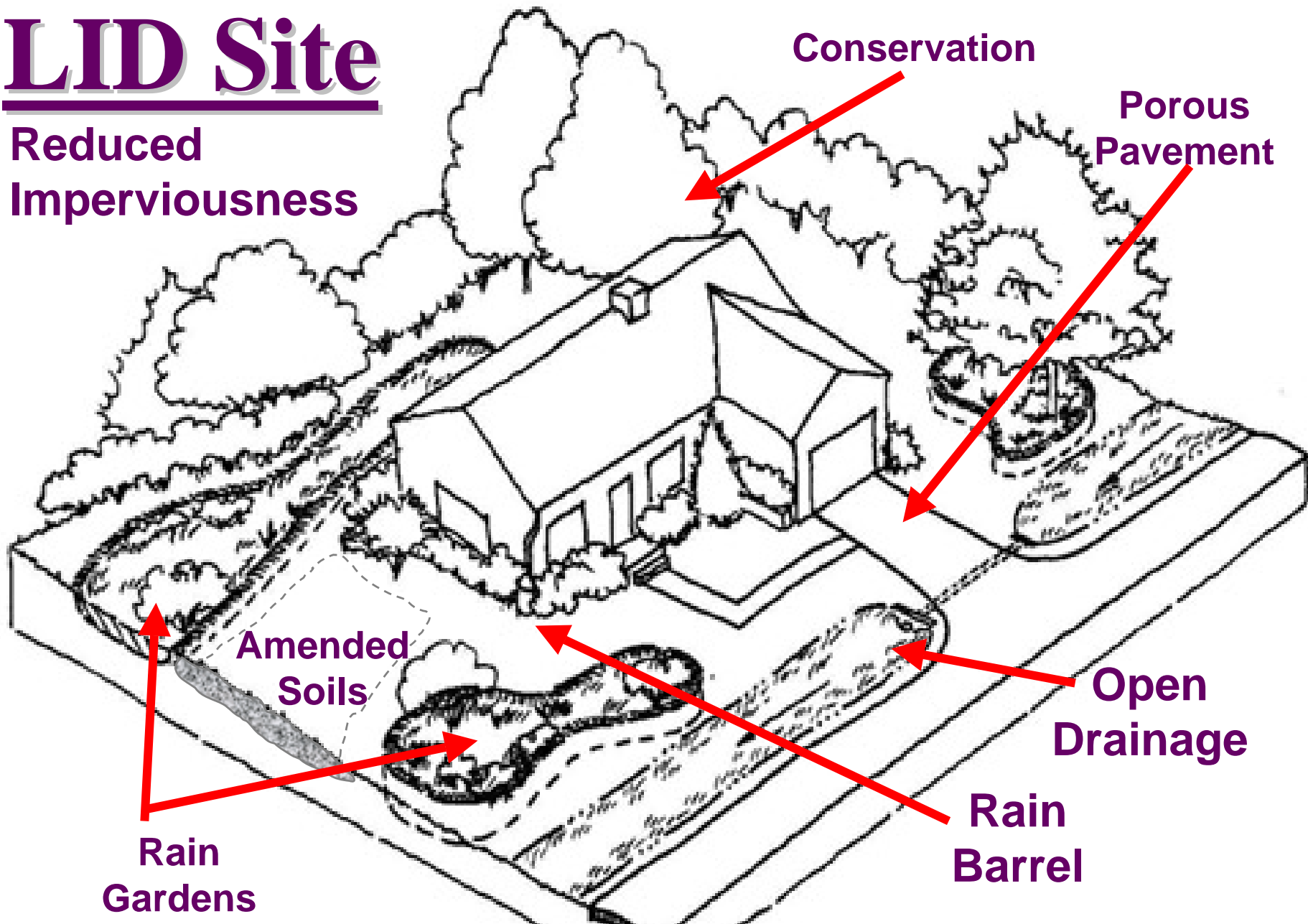
Where Do We Look for Reductions?

- Agricultural practices
- Waste-water treatment
- Urban/suburban storm water
- Land use, low impact development
- Educating the public



LID Site

Reduced
Imperviousness



How Do We Look for Reductions?

- Reductions locally with existing resources
- Reductions locally requiring new resources
- Reductions from statewide initiatives

What Tools Do We Have?

- Loads by source categories
- Extensive BMP information
- Use “scenario builder” to explore options
- Chesapeake Bay Watershed Model
- Technical expertise of Bay Program

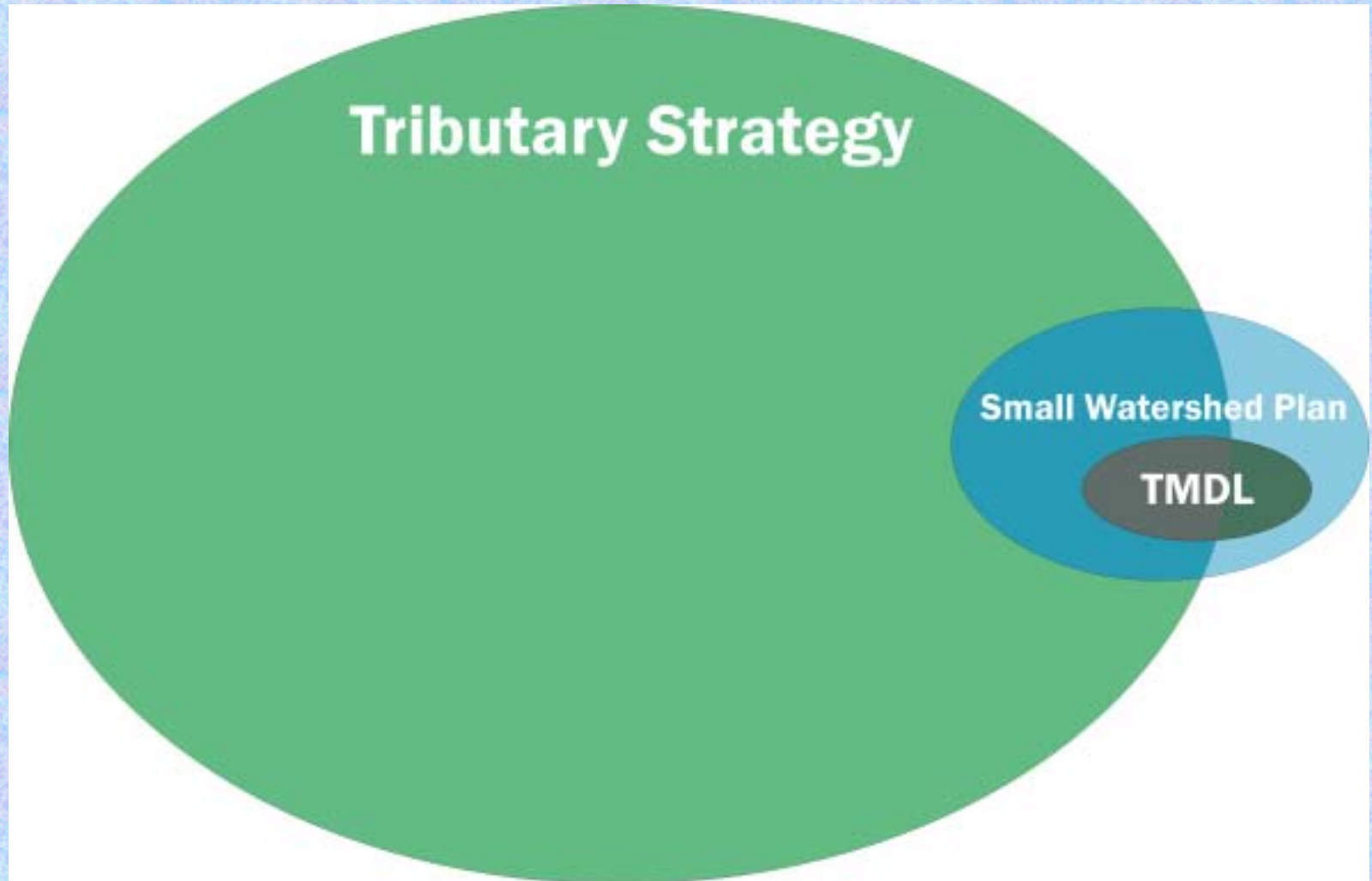
What's Included in the Revised Strategies?

- A “snapshot” of the basin
- Actions to reduce loads to meet goal
- Discussion of funding needs and options
- Tracking method for loads, reductions and cap
- Phased strategy implementation

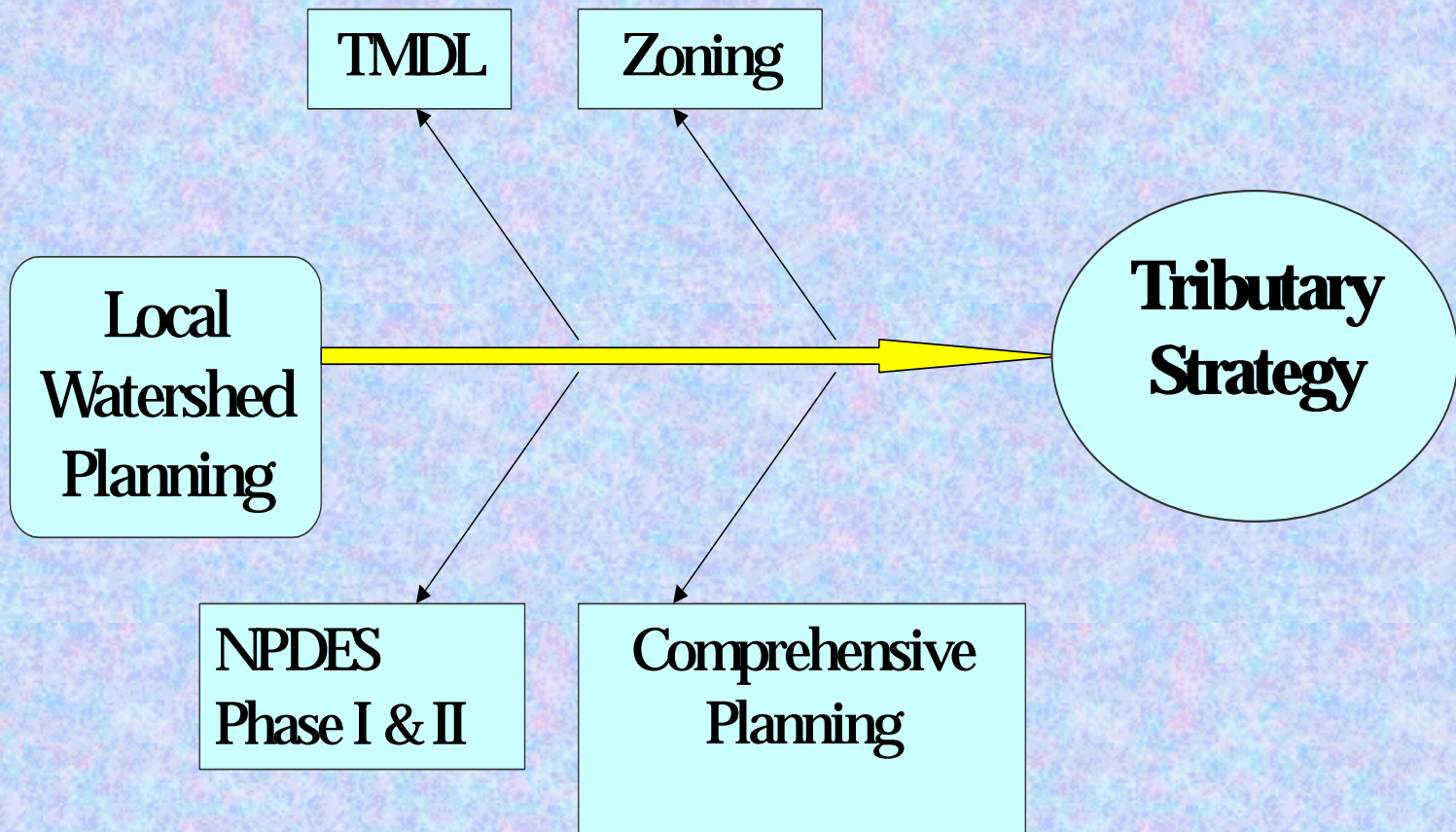
What's Included?

- Status/Progress of N, P, sediment reductions
 - Successful reductions thus far
- Specific implementation strategies
 - BMPs – what/where
 - Local government initiatives – e.g. LID
 - Point Source upgrades
 - Watershed Planning

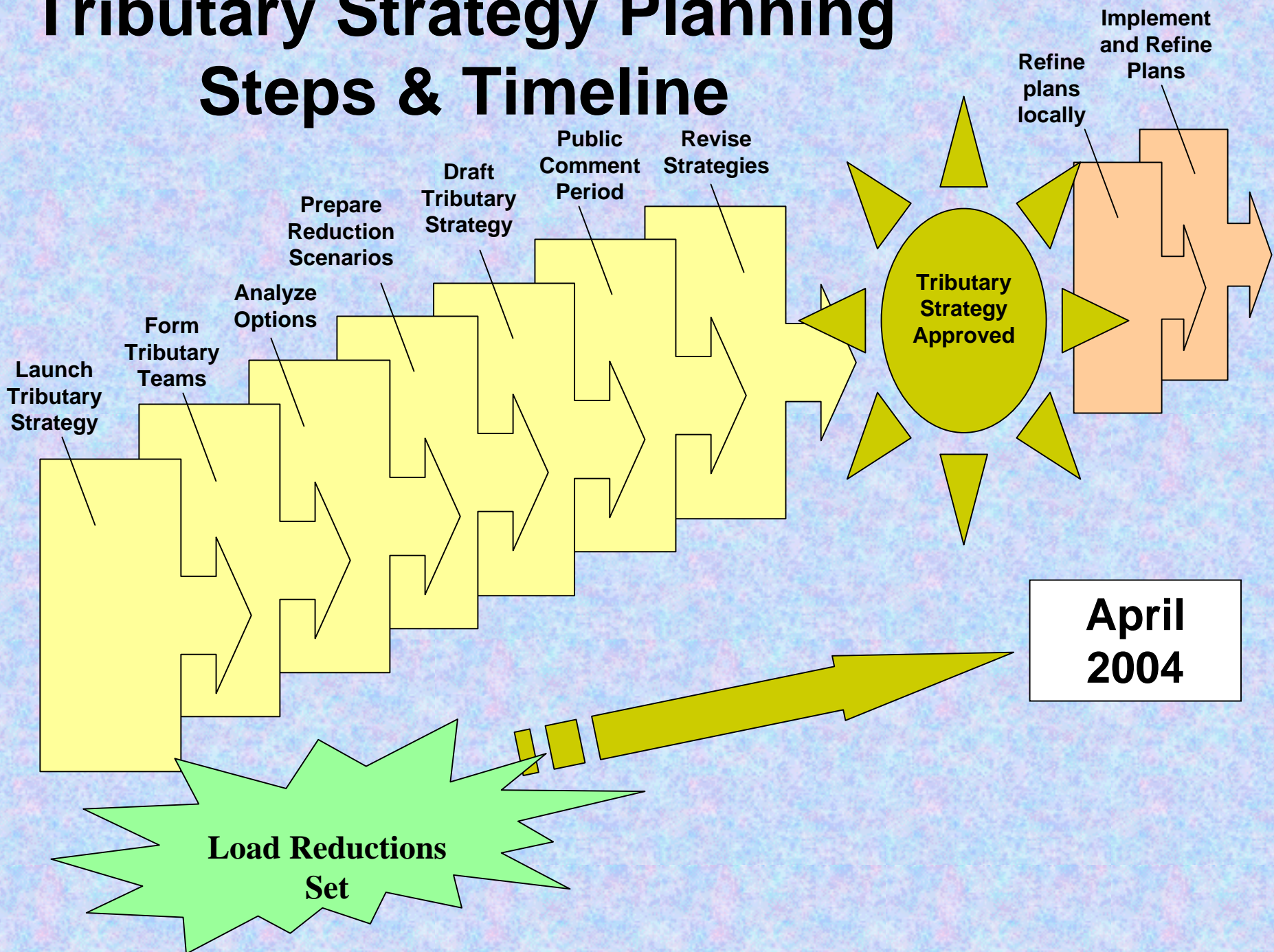
Nested Watershed Planning



Tributary Strategy Process



Tributary Strategy Planning Steps & Timeline



Proposed Timeline

- Establish Tributary Team: August 2003
- Tributary Team reviews allocations and develops scenarios: August-November 2003
- Draft Tributary Strategy: Nov/Dec 2003
- Public meetings: January/February 2004
- Revise Tributary Strategy: March/April 2004
- Deliver completed Tributary Strategy: April 2004

2004 - 2010

- Continuing refinement of Tributary Strategy
- Dynamic document
 - Implement existing programs, projects
 - Refine practices, costs, funding
 - Identify and implement new/unique/innovative programs and practices
 - Marketing strategy to engage new array of stakeholders

What is the Next Step?

- Establish a diverse, *active* Tributary Team
 - Team members that represent all sectors and areas of the Shenandoah basin
- Tributary Team meeting – Late Aug./Early Sept.
- Need *commitment* by Team members
 - Revisions on *very* aggressive schedule
 - *Much* work to do
- Trib Team to conduct as much work as possible via email, conference calls, etc.
 - Let's use our time to do the work, not travel

Tributary Strategy

Website Address:

www.naturalresources.virginia.gov

Questions ???

Tamara Keeler

Regional Manager

tkeeler@dcr.state.va.us

540-332-8955

Julie Jenkins

Watershed Field Coordinator

jjenkins@dcr.state.va.us

540-332-9238